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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/699,495	10/31/2000	Allen Louis Gorin	112233-CONT 2	8836

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EXAMINER	
PHAN, JOSEPH T	

ART UNIT	PAPER NUMBER
2614	

DATE MAILED: 10/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/699,495	GORIN ET AL.	
	Examiner	Art Unit	
	Joseph T. Phan	2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 July 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,7,9-13,15-30,34-40,42-54,56 and 57* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3, 7, 9-13, 15-30, 34-40, 42-54, 56-57* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 7, 9-13, 15-30, 34-40, 42-54, and 56-57 rejected under 35 U.S.C. 102(e) as being anticipated by Beyda, Patent #6,487,277.

Regarding claim 1, Beyda teaches an automated task classification system that operates on a task objective of a user, comprising:

a recognizer that spots at least one of a plurality of meaningful phrases in an input communication of the user including verbal input and non-verbal input(col.8 lines 29-37), each of the plurality of meaningful phrases having an association with at least one of a predetermined set of task objectives(col.9 line 65-col.10 line 17), and a task classifier that makes a classification decision based. at least partly on the spotted at least one of the plurality of meaningful phrases(col.7 lines 13-31 and col.8 lines 29-37).

Regarding claim 2 Beyda teaches the automated task classification system of claim 1, wherein the meaningful phrases are expressed in a multimodal form(col.8 lines 29-37).

Regarding claim 3 Beyda teaches the automated task classification system of claim 2, wherein the multimodal form includes inputs from at least one channel(col.7 lines 13-31 and col.8 lines 29-37).

Regarding claim 7 Beyda teaches the automated task classification system of claim 1, wherein the meaningful phrases in the user's input communication received by the recognizer are derived from the user's actions (col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 9 Beyda teaches the automated task classification system of claim 1, further comprising a dialog module that enters into a dialog with the user to obtain a feedback response from the user (col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 10 Beyda teaches the automated task classification system of claim 9, wherein the dialog module prompts the user to provide a feedback response that includes additional information with respect to the user's initial input communication(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 11, Beyda teaches the automated task classification system of claim 9, wherein the dialog module prompts the user to provide a feedback response that includes confirmation with respect to at least one of the set of task objectives determined in the classification decision(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 12, Beyda teaches the automated task classification system of claim 1, wherein the task classifier routes the input communication based on the

classification decision(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 13 Beyda teaches the automated task classification system of claim 12, wherein the task objective is performed after the input communication is routed by the task classifier(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 15, Beyda teaches the automated task classification system of claim 1, wherein the system is used for customer care purposes(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 16 Beyda teaches the automated task classification system of claim 1, wherein the classification decision and the corresponding input communication of the user are collected by the system for automated learning purposes(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 17, Beyda teaches the automated task classification system of claim 1, wherein the association between the plurality of meaningful phrases(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17), and the predetermined set of task objectives is based at least partly on a measure of usefulness of one of the plurality of meaningful phrases to a specified one of the predetermined task objectives(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17; performing the action is 100% useful).

Regarding claim 18, Beyda teaches the automated task classification system of claim 17, wherein the usefulness measure is a salience measure(col.7 lines 13-31 and col.8 lines 29-37).

Regarding claim 19, Beyda teaches the automated task classification system of claim 18, wherein the salience measure is represented as a conditional probability of the task objective being requested given an appearance of one of the plurality of meaningful phrases in the input communication, the conditional probability being a highest value in a distribution of conditional probabilities over the set of predetermined task objectives*(col.7 lines 13-31 and col.8 lines 29-37; when phrase is understood, it is 100% probable of the task objective performed of one of many task objectives).*

Regarding claim 20, Beyda teaches the automated task classification system of claim 18, wherein each of the plurality of meaningful phrases has a salience measure exceeding a predetermined threshold*(col.7 lines 13-31 and col.8 lines 29-37; 100% salience measure exceeds matched threshold when action is performed.*

Regarding claim 21, Beyda teaches the automated task classification system of claim 1, wherein the association between the meaningful phrases and the predetermined set of task objectives is based at last partly on a measure of commonality within a language of the meaningful phrases(col.7 lines 13-31, col.8 lines 29-37; 100% commonality in Beyda's English language).

Regarding claim 22, Beyda teaches the automated task classification system of claim 21, wherein the measure of commonality is a mutual information measure(col.7 lines 13-31, col.8 lines 29-37; matching understood phrases is mutual).

Regarding claim 23, Beyda teaches the automated task classification system of claim 22, wherein each of the plurality of meaningful phrases has a mutual information measure exceeding a predetermined threshold*(col.7 lines 13-31 and col.8 lines 29-37; measure exceeds matched threshold when action is performed.*

Regarding claim 24, Beyda teaches the automated task classification system of claim 1, wherein the task classifier makes the classification decision using a confidence function*(col.7 lines 13-31 and col.8 lines 29-37; if the system is not confident, it will not perform the action).*

Regarding claim 25, Beyda teaches the automated task classification system of claim 1, wherein the input communication from the user represents a request for at least one of the set of predetermined task objectives.

Regarding claim 26, Beyda teaches the automated task classification system of claim 1, wherein the input communication is responsive to a query of a form "How may I help you?"(*col.7 lines 13-31 and col.8 lines 29-37;* this question can be asked in multiple ways/forms; Beyda prompts the user to help).

Regarding claim 27, Beyda teaches the automated task classification system of claim 1, wherein each of the verbal input and the non-verbal input are directed to one of the set of predetermined task objectives and each of the verbal input and the non-verbal input is labeled with the one task objective to which it is directed(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 24, Beyda teaches an automated routing system that automatically routes a user's request based on an automated task classification decision, comprising:

a recognizer that spots at least one of the plurality of meaningful phrases in the user's request including verbal input and non-verbal input(Fig.1-2 and col.8 lines 29-37), each of the plurality of meaningful phrases having an association with at least one of a predetermined set of task objectives(col.7 lines 13-31);

a task classifier that makes a classification decision based. at least partly on the spotted at least one of the plurality of meaningful phrases and

a task router that routes the user's request in order to perform at least one of the task objectives based on the classification decision(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 29, Beyda teaches the automated routing system of claim 28, wherein the meaningful phrases are expressed in multimodal form(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 30, Beyda teaches the automated routing system of claim 29, wherein the multimodal form includes inputs from at least one channel(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 34, Beyda teaches the automated routing system of claim 28, wherein the meaningful phrases in the user's input communication received by the recognizer are derived from the user's actions(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 36, Beyda teaches the automated routing system of claim 28, further comprising a dialog module that enters into a dialog with the user to obtain a feedback response from the user(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 37, Beyda teaches the automated routing system of claim 36, wherein the dialog module prompts the user to provide a feedback response that includes additional information with respect to the user's request(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 38, Beyda teaches the automated routing system of clam 36, wherein the dialog module prompts the user to provide a feedback response that includes confirmation with respect to at least one of the set of task objectives determined in the classification decision(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 39, Beyda teaches the automated routing system of claim 36, wherein if the task classifier cannot make a classification decision after the dialog is conducted with the user, the router routes the user's request to a human for assistance(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 40, Beyda teaches the automated routing system of claim 39, wherein the task objectiveis performed after the user's request is routed(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 42, Beyda teaches the automated routing system of claim 28, wherein the system is used for customer care purposes(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 43, Beyda teaches the automated routing system of claim 28, wherein the classification decision and the corresponding user request are collected by the system for automated learning purposes(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 44, Beyda teaches the automated routing system of claim 28, wherein the association between the pluralitv of meaningful phrases and the predetermined set of task objectives ' is based. at least partlv. on a measure of usefulness of ((a11 one of the pluralitv of meaningful phrases to a specified one of the predetermined task objectives(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 45, Beyda teaches the automated routing system of claim 44, wherein the usefulness measure is a Salience measure(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 46, Beyda teaches the automated routing system of claim 45, wherein the salience measure is represented as a conditional probability of the task objective being requested given an appearance of the meaningful phrase in the user's request, the conditional probability being a highest value in a distribution of (lthell conditional probabilities over the set of predetermined task objectives(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 47, Beyda teaches the automated routing system of claim 45, wherein each of the plurality of meaningful phrases has a salience measure exceeding a predetermined threshold(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 48, Beyda teaches the automated routing system of claim 28, wherein the association between the plurality of meaningful phrases and the predetermined set of task objectives ' is based. at least partlv. on a measure of commonality with a language of the pluralitv of meaningful phrases(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 49, Beyda teaches the automated routing system of claim 48, wherein the measure of commonalitv is a mutual information measure(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 50, Beyda teaches the automated routing system of claim 49, wherein each of the plurality of meaningful phrases has a mutual information measure exceeding a predetermined threshold(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 51, Beyda teaches the automated routing system of claim 28, wherein the task classifier makes the classification decision using a confidence function(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 52, Beyda teaches the automated routing system of claim 28, wherein the user's request represents a request for at least one of the set of

predetermined task objectives(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 53, Beyda teaches the automated routing system of claim 28, wherein the user's request is responsive to a query of a form ttl-low may I help you?"(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 54, Beyda teaches the automated routing system of claim 28, wherein each of the verbal use-x input and the non-verbal use-y input are directed to one of the set of predetermined task objectives and each of the verbal input and the non-verbal input being labeled with the one task objective to which it is directed(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 55, Beyda teaches the automated task classification system of claim 1, further comprising in interpretation module configured to apply a confidence function based on a probabilistic relation between the spotted at least one of the plurality of meaningful phrases in the input communication of the user and the at least one of the predetermined set of task objectives, wherein the task classifier makes the classification decision based, at least partly on, a result of the applied confidence function(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 56, Beyda teaches the automated routing system of claim 28, further comprising an interpretation module configured to apply a confidence function based on a probabilistic relation between the spotted at least one of the plurality of meaningful phrases in the user's request and the at least one of the predetermined set of task objectives, wherein the task classifier makes the classification decision based, at

least partly, on a result of the applied confidence function(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Response to Arguments

2. Applicant's arguments with respect to claims 1-56 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph T. Phan whose telephone number is (571) 272-7544. The examiner can normally be reached on Mon-Fri 9am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fan Tsang can be reached on (571) 272-7547. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JTP
September 29, 2006

CREIGHTON SMITH
PRIMARY EXAMINER